

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Fukutomi et al.

Serial No.: to be assigned

Group Art Unit: 2812

Filed: Concurrently filed

Examiner: to be assigned

For: FABRICATION PROCESS OF
SEMICONDUCTOR PACKAGE AND
SEMICONDUCTOR PACKAGE

Attorney Docket No.: 7426-082

New York, NY
January 8, 2002



INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
- 1b. A legible copy of :
 - ☐ Each U.S. patent application publication and U.S. and foreign patent;
 - ☐ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☐ all other information or portion which caused it to be listed on the PTO-1449.

- 1c. ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
- 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.
2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
- ☒ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☐ Before the mailing of the first Office action on the merits;
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.
3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a or 3b)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$180.00 fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is:
- ☐ enclosed
 - ☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

(Item 3b to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:

- ☐ enclosed.
- ☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

The Certification Statement in Item 5 below is applicable.

5. ☐ Certification Statement *(applicable if Item 3a or Item 4 is checked)*

(Check either Item 5a or 5b)

- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this Information Disclosure Statement was first cited in a

communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was known by any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

6. ☒ This application is a continuation application under 37 C.F.R. §1.60 or §1.53(b) or (d).

(Check appropriate Items 6a, 6b and/or 6c)

- 6a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 6b. ☒ Copies of publications listed on Form PTO-1449 from prior applications Serial Nos. 08/716,362, 09/326,316, and 09/478,682, filed on September 18, 1996, June 7, 1999 and January 19, 2000, respectively, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 6c. ☐ Copies of the publications listed on Form PTO-1449 were not previously cited in prior application Serial No. , filed on , and are provided herewith.
7. ☐ This is a Supplemental Information Disclosure Statement. *(Check either Item 7a or 7b)*
- 7a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on _____. A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on _____.
- 7b. ☐ This Supplemental Information Disclosure Statement is timely filed within one (1) month of a PTO Notice under 37 C.F.R. §1.97(i).
8. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:

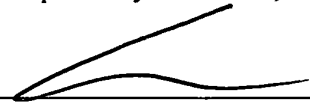
(Check Item 8a, 8b, or 8c)

- 8a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 8b. ☐ set forth in the application.
- 8c. ☐ enclosed as an attachment hereto.

9. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Pennie & Edmonds LLP Deposit Account No. 16-1150.
10. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date January 8, 2002



Charles E. Miller
PENNIE & EDMONDS LLP
1155 Avenue of Americas
New York NY 10036-2720
(212) 790 - 9090

24,576
(Reg. No.)

Notice of References Cited

Application No.
09/326,316

Applicant(s)
Fukutomi et al.

Examiner
Luan Thai

Group Art Unit
2811

Page 1

U.S. PTO
09/042408



U.S. PATENT DOCUMENTS

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	5,216,278	06/01/93	Lin et al.	257	688
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					

FOREIGN PATENT DOCUMENTS

	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U		
V		
W		
X		

U.S. PATENT DOCUMENTS

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	3,878,555	Apr. 1975	Freitag et al.	257	668
B	4,376,287	Mar. 1983	Sechi	257	668
C	3,748,543	July 1973	Roberson	257	778
D	5,381,039	Jan. 1995	Morrison	257	778
E	5,579,207	Nov. 1996	Hayden et al.	257	778
F					
G					
H					
I					
J					
K					
L					
M					

10/042408
01/08/02

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	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
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P						
Q						
R						
S						
T						

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U		
V		
W		
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Notice of References Cited

Application/Control No.

09/487,682

Applicant(s)/Patent Under
Reexamination
FUKUTOMI ET AL.

Examiner

Josetta I. Jones

Art Unit

2812

Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US- -			
	B	US- -			
	C	US- -			
	D	US- -			
	E	US- -			
	F	US- -			
	G	US- -			
	H	US- -			
	I	US- -			
	J	US- -			
	K	US- -			
	L	US- -			
	M	US- -			

14879 U.S. Pat.
10/042408

01/08/02

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	JP-3-94458-A	04-1991	Japan	Tanaka	- -
	O	- -				
	P	- -				
	Q	- -				
	R	- -				
	S	- -				
	T	- -				

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Tummala et al., Microelectronics Packaging Handbook, Semiconductor Packaging, 1997, Chapman and Hall, Second Edition, II-242.
	V	
	W	
	X	

A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.

7426-065

APPLICATION NO.

APPLICANT

Fukutomi et al.

FILING DATE

June 7, 1999

GROUP

DC549 U.S. PRO
09/22/96

06/07/99

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
LT	AA	5,467,252	11/1995	Nomi et al.	361	760	
LT	AB	4,688,150	8/1987	Peterson	361	403	
LT	AC	3,878,555	4/1975	Freitag et al.	257	668	
LT	AD	4,376,287	3/1983	Sechi	257	668	
LT	AE	3,748,543	7/1973	Roberson	257	778	
LT	AF	5,381,039	1/1995	Morrison	257	778	
LT	AG	5,579,207	11/1996	Hayden et al.	257	778	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
LT	AH	EP 0391790 A1	10/10/90	Europe				
LT	AI	WO92/21150	11/26/92	PCT				
LT	AJ	EP 0 091 072 A	10/12/83	Europe				
LT	AK	JP 5-129473	5/25/93	Japan				
LT	AL	JP 3-94459	4/19/91	Japan				
LT	AM	59-208756	11/27/84	Japan				

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

LT	AN	Matsuo et al., "Smallest Flip-Chip-Like Package 'Chip Scale Package (CSP)"; The Second VLS Packaging Workshop of Japan, 1994
LT	AO	Nikkei Materials & Technology 94.4 (no. 140)

EXAMINER

L. van Thien

DATE CONSIDERED

09/20/99

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

U.S. PATENT DOCUMENTS

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	5,467,252	11/1995	Nomi et al.	361	760
B	4,688,150	8/1987	Peterson	361	403
C					
D					
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N						
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	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
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V		
W		
X		

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APP 
Fukutomi

FILING DATE

September 18, 1996

GROUP

2503

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01/08/02

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS
SWC	AF	EP 0 091 072 A	10/12/83	Europe		

EXAMINER

Citrine

DATE CONSIDERED

9/29/97

Name

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

7426-000 GROUP 2500 08/16,362

APPLICANT

Fukutomi et al.

FILING DATE

9/18/96

GROUP

2503

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS

10/04/96 U.S. PTO

10/04/96

01/08/02

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATE YES
SWC	AA JP 5-129473	5/25/93	Japan			X Abstract
SWC	AB JP 3-94459	4/19/91	Japan			X Abstract
SWC	AC JP 59-208756	11/27/84	Japan			X Abstract

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

SWC	AD	Matsuo et al., "Smallest Flip-Chip-Like Package 'Chip Scale Package (CSP)"; The Second VLSI Packaging Workshop of Japan, 1994
SWC	AE	Nikkei Materials & Technology 94.4 (no.140)

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DATE CONSIDERED

9/29/97

LIST OF REFERENCES SUBMITTED BY APPLICANT

(Use several sheets if necessary)

APPLICANT

Fukutomi et al.

FILING DATE

September 18, 1996

GROUP

2811

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AA	EP 0391790 A1	10/10/90	Europe				
	AB	WO 92/21150	11/26/92	PCT				

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